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Status of Furbearers in Manitoba: A brief overview.

By Stardom, Richard, 1986

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Status of Furbearers in Manitoba: A brief overview.

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OVERVIEW

The distribution of furbearers in the province has been well documented through the use of harvest statistics. While the range of most of the species has remained consistent with that of 80 years ago, several species (i.e. badger, Taxidea taxus, fisher, Martes pennanti; marten, Martes americana) have expanded their range during the past decade. Relative abundance indices are general for many of the species but are consistent with habitat suitability and productivity. Densities of species such as badger and long-tail weasel, Mustela frenata, have declined with intensive land use of their traditional range while species such as beaver, Castor canadensis, and raccoon, Procyon lotor, are present in much higher densities than those of 50 years ago.

Except for maturation of forest stands, the habitat in the forested regions of the province remains relatively stable. In the southern most quarter of the province, intensive drainage and agriculture is removing wildlife habitat at the rate of 3-5 per cent of remaining habitat per year. While red fox (Vulpes vulpes), and coyote (Canis latrans), appear to adapt to these changing conditions, many of the other furbearers have declined in density. Riding Mountain National Park, several Provincial Parks, Wildlife Management Areas and Provincial Forests retain native cover within this agricultural zone and provide foci for furbearer dispersal.

Although there have been large fluctuations in the annual harvest of furbearers since 1919-1920, the crop taken over the past decade has been relatively stable to slightly increasing for most furbearers. This is consistent with furbearer population trends, pelt values, number of trappers and regulated seasons. There is little illegal utilization or use only for food. Use of furbearers in the live animal trade is discouraged. Predator or nuisance animal control is generally reactive and site-specific with normally only beaver, black bear, (Ursus americanus) grey wolves, (Canis lupus), and raccoon being involved.

Under The Wildlife Act (July, 1980) animals utilized by the fur industry are classified as furbearers except for black bear and grey wolves which are classified as big game and striped skunk, Mephitis mephitis, which has no formal classification. Annual season regulations control harvest periods for each furbearer within the guidelines of furbearer population abundance, pelt primeness and nuisance level.

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TABLE OF CONTENTS

	Page
OVERVIEW	i
LIST OF FIGURES	iv
LIST OF TABLES	iv
INTRODUCTION	1
BIOLOGICAL DATA	
Distribution: current and historical	5
Population estimates and trends	17
Habitat	18
UTILIZATION DATA	
Fur harvest statistics	20
Illegal utilization	20
Other uses	20
Protection Status	23
Control of Nuisance Furbearers	23
REFERENCES CITED	24

LIST OF FIGURES

Figure		Page
1.	Maps showing historical and current range and relative abundance of badger, black bear, beaver and bobcat.	6
2.	Maps showing historical and current range and relative abundance of coyote, short-tailed weasel, long-tailed weasel and least weasel	7
3.	Maps showing historical and current range and relative abundance of fisher, arctic fox, colored fox and lynx	8
4.	Maps showing historical and current range and relative abundance of marten, mink muskrat and otter	9
5.	Maps showing historical and current range and relative abundance of raccoon, striped skunk, red squirrel and wolverine	10
6.	Map showing current range and relative abundance of grey wolves	11
7.	Maps showing distribution of major furbearer harvest by species	22

LIST OF TABLES

Table		Page
1.	General status of furbearers in Manitoba 1984 . . .	3
2.	The Status of Furbearing Animals in Manitoba (1982).	19
3.	Primary species harvested in each biogeographic region	21

INTRODUCTION

In general, the three major data parameters desirable for management of a wildlife species which is harvested are knowledge of 1) distribution and population numbers of the species, 2) proportion and age/sex composition of the population which may be harvested and still ensure species maintenance and 3) the volume and age/sex composition of the actual harvest.

As with many other mammals, furbearing species utilized by the fur industry are difficult to census, but, by signs of presence and harvest data, their distribution and relative abundance can be readily documented. Only in the cases of beaver and muskrats can actual counts easily be made of lodges and houses. With relatively minor ground verification and knowledge of the average numbers of individuals per lodge or house, reasonably accurate estimates of population can be made. As most furbearers are nocturnal and secretive with movement and behaviour influenced so dramactically by weather and field conditions, even track or call census systems require extensive background data to provide valid estimates. It is due to these difficulties that most population estimates can only be regarded as indices but if made judiciously provide a good basis for trend decisions. Population size or density is also one of many factors influencing the harvest and inferences can be drawn from harvest statistics to substantiate trend information.

To further substantiate the viability of furbearer populations, additional data should be obtained on the age/sex composition of the harvest. Generally, the greater proportion of the harvest should be juveniles and particularly males. If not, harvest restrictions are imposed. A healthy, viable furbearer population is indicated when the age/sex composition of the harvest (which shows no imbalances from the normal age/sex structure of the population) is coupled with stable long term fur harvest statistics.

Information contained in this report provides a basis for establishing the general status of furbearers in Manitoba (Table 1). Though no major population or age/sex census is carried out for all species, distribution, relative abundance and long-term fur harvest statistics have been well-documented.

Table 1. General Status of Furbearers in Manitoba 1984

Manitoba Furbearer Status- 1984

Species	Legal Status	Population Abundance	Conservation Methods and Management Employed	General Status	Harvest 1983-84	Potential Harvest	Remarks
Badger	Furbearer	Maintaining low population levels	No special management, regulated season	Satisfactory	489	700	Limited range, possible decline in densi
Bear- -Black	Big Game	Adequate	License required in trapping and hunting	Excellent	679	1,500	Controlled in agricultural areas.
-Polar	Big Game	Adequate	Protected, seals required	Satisfactory	No Data	50	Limited to Hudson Bay
Beaver	Furbearer	Abundant	Regulated Seasons and licenses, research, surveys.	Excellent	31,234	80,000	Under harvested
Coyote	Furbearer	Adequate	No special management. Regulated season.	Satisfactory	8,569	10,000	Habitat loss in extreme south
Ermine	Furbearer	Adequate	Regulated season, research on long-tail weasel.	Satisfactory	5,212	20,000	Possible decline in long-tail ermine, habitat loss
Fisher	Furbearer	Adequate	Regulated seasons and licenses	Satisfactory	4,418	3,000	Range expansion in some areas
Fox -Arctic	Furbearer	Adequate in cycles	Regulated seasons and licenses	Satisfactory	140	1,200	At low point in cycle, 1983/84
-Colored	Furbearer	Adequate	Regulated seasons and licenses	Satisfactory	10,586	15,000	Increase in northern populations
Lynx	Furbearer	Adequate in cycles	Regulated seasons and licenses	Satisfactory	596	3,000	Peak of last cycle during 1978/79, low point of cycle 1983/84

Species	Legal Status	Population Abundance	Conservation Methods and Management Employed	General Status	Harvest 1983-84	Potential Harvest	Remarks
Bobcat	Furbearer	Rare, limited range	Regulated season and licenses	Unknown	No Data	---	At extreme northern edge of range
Cougar	Protected	Rare	Protected by regulation	Unknown	Nil	Nil	Documentation of sightings continuing
Marten	Furbearer	Maintaining low population levels	Regulated seasons and licenses	Not satisfactory in some areas	3,380	3,000	Some restocking done range expansion in some areas
Mink	Furbearer	Adequate	Regulated seasons and licenses	Satisfactory	7,314	20,000	Population stable
Muskrat	Furbearer	Abundant	Regulated trapping seasons, muskrat marsh rehabilitation and special permits	Satisfactory	235,980	600,000	Under harvested. Subject to extreme fluctuations with habitat conditions
Otter	Furbearer	Adequate	Regulated trapping seasons and licenses.	Not satisfactory in some areas	1,595	3,000	Population stable
Raccoon	Furbearer	Adequate	Regulated seasons and licenses	Satisfactory	3,081	6,000	Population stable
Skunk	No Status	Abundant	Not protected.	Excellent	0	10,000	Value not sufficient to encourage harvest
Squirrel, Red	Furbearer	Abundant	Regulated trapping and and licenses	Excellent	18,981	200,000	Only red squirrel harvested, under harvested
Wolf, Timber	Big Game	Adequate	Regulated hunting and trapping seasons and licenses	Satisfactory	379	500	Population stable
Wolverine	Furbearer	Rare	Regulated trapping seasons and licenses.	Satisfactory	67	100	Rare

Potential harvest figures expressed as long-term average annual sustained yield (Revised 1984).

BIOLOGICAL DATA

Distribution: Current and historical

The two best references for distribution and relative abundance of furbearers in Manitoba are Weir (1982) for the current status and Seton (1909) for the historical information. Figures 1-6 provide the combined data from the two sources with relative abundance information only being available for current range. The following is a comparison of current and historical distribution by species.

Badger- *Taxidea taxus*: In Manitoba, badger are at the extreme northern limits of their range which has expanded northward since historical times. This is consistent with the expansion of agriculture into fringe areas and the subsequent expansion of ground squirrels and gophers, the primary food source for badgers. Drainage has lowered the water table in these new agricultural areas and roadways and ditch spoil banks have provided burrow sites for badgers.

Black Bears- *Ursus americanus*: The range of black bears is essentially province wide, though they are only occasional visitors in the heavily populated extreme south as well as in the north above the tree line. Increasing populations of black bears have created high density situations in the park areas of the western part of the province.

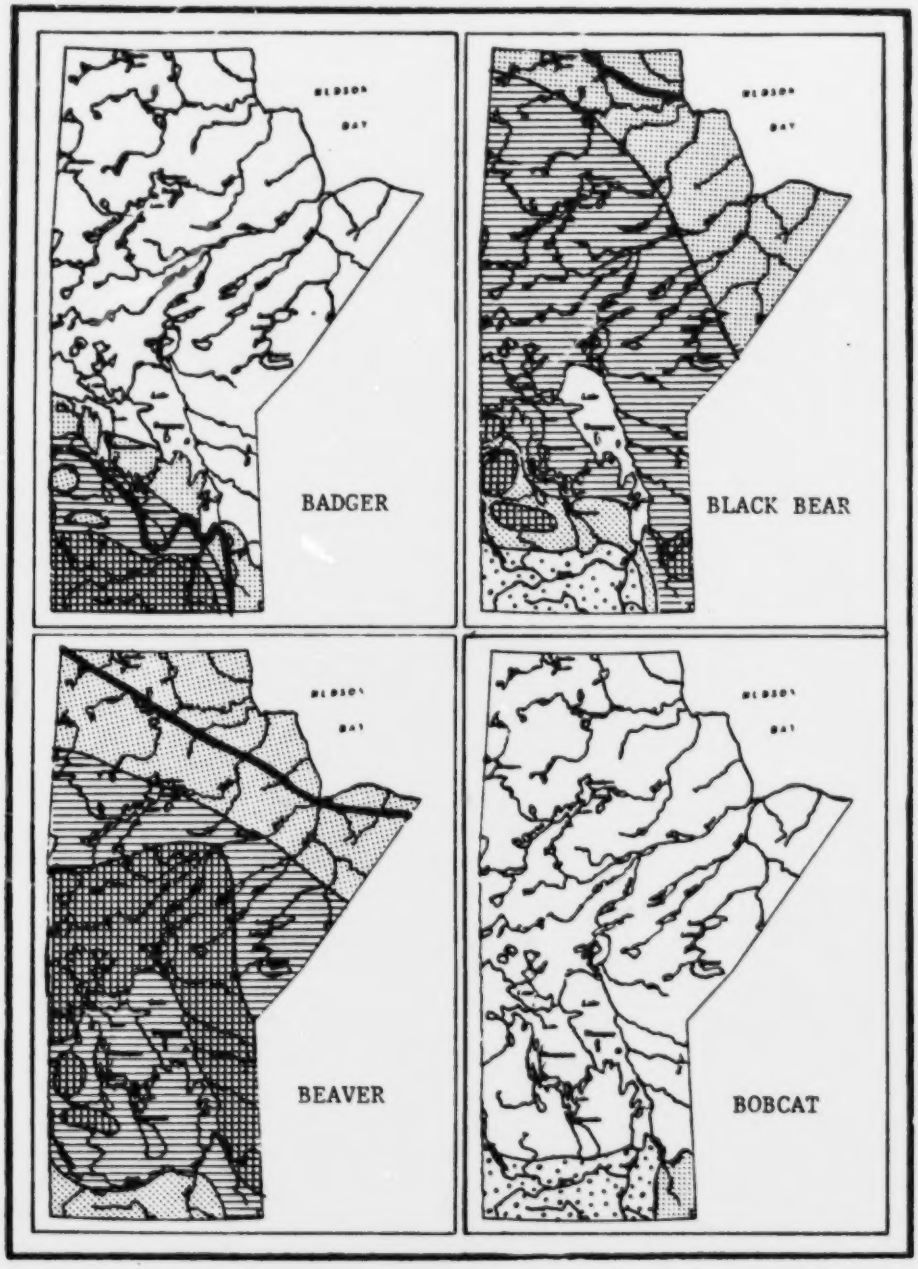

Fig. 1: Maps showing historical and current range and relative abundance of badger, black bear, beaver and bobcat.

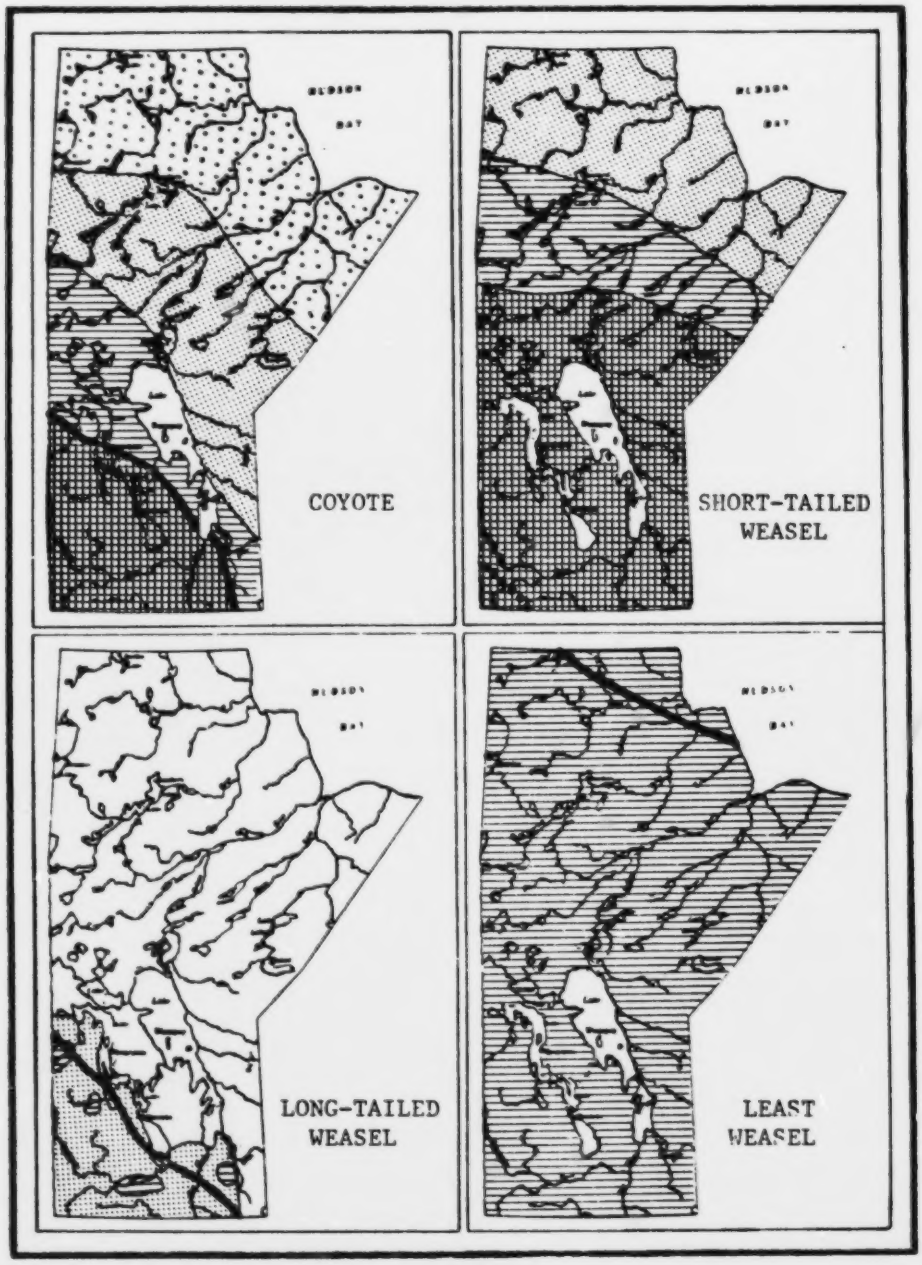

Fig. 2: Maps showing historical and current range and relative abundance of coyote, short-tailed weasel, long-tailed weasel and least weasel.

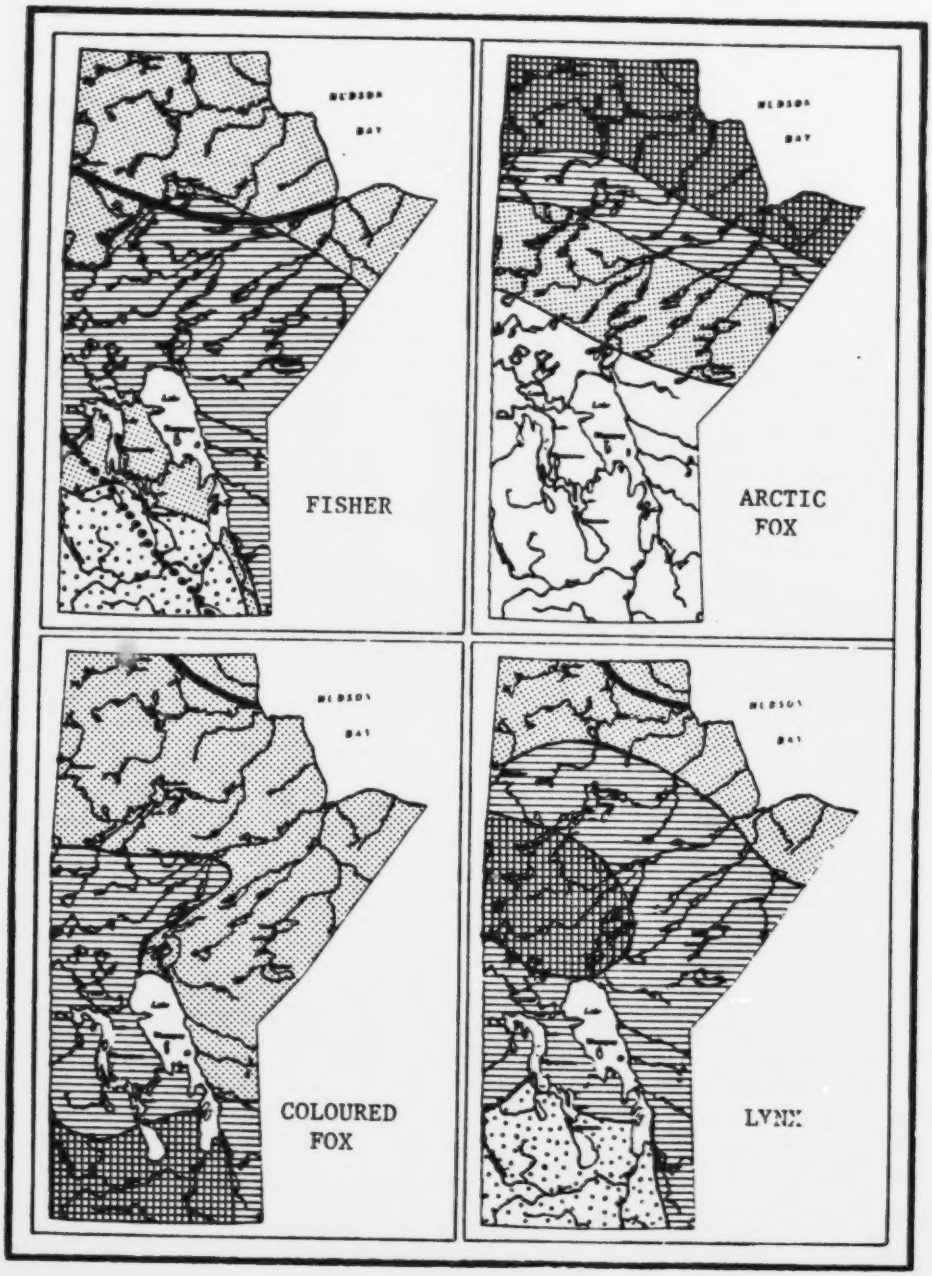

Fig. 3: Maps showing historical and current range and relative abundance of fisher, Arctic fox, coloured fox and lynx.

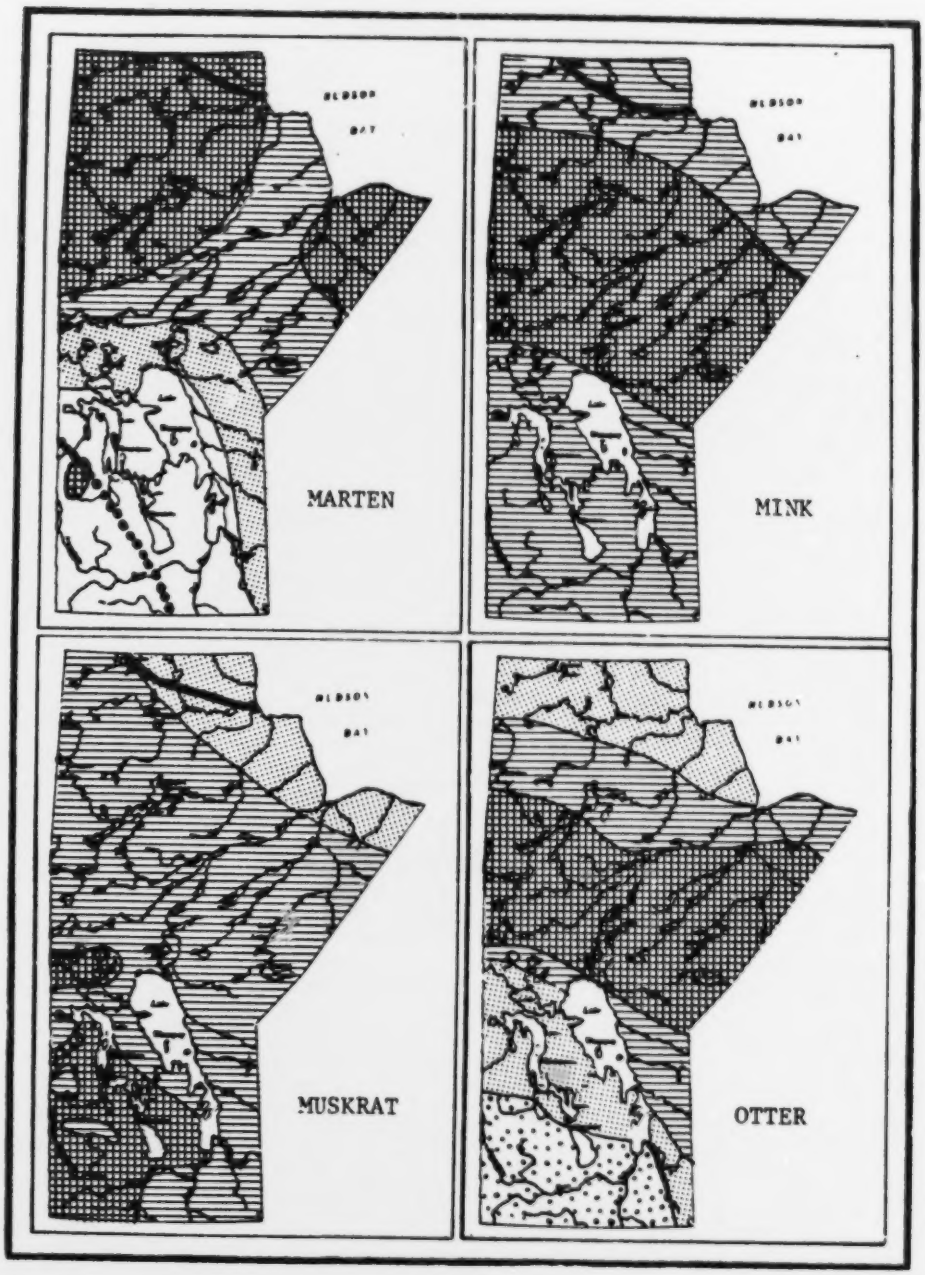

Fig. 4: Maps showing historical and current range and relative abundance of marten, mink, muskrat and otter.

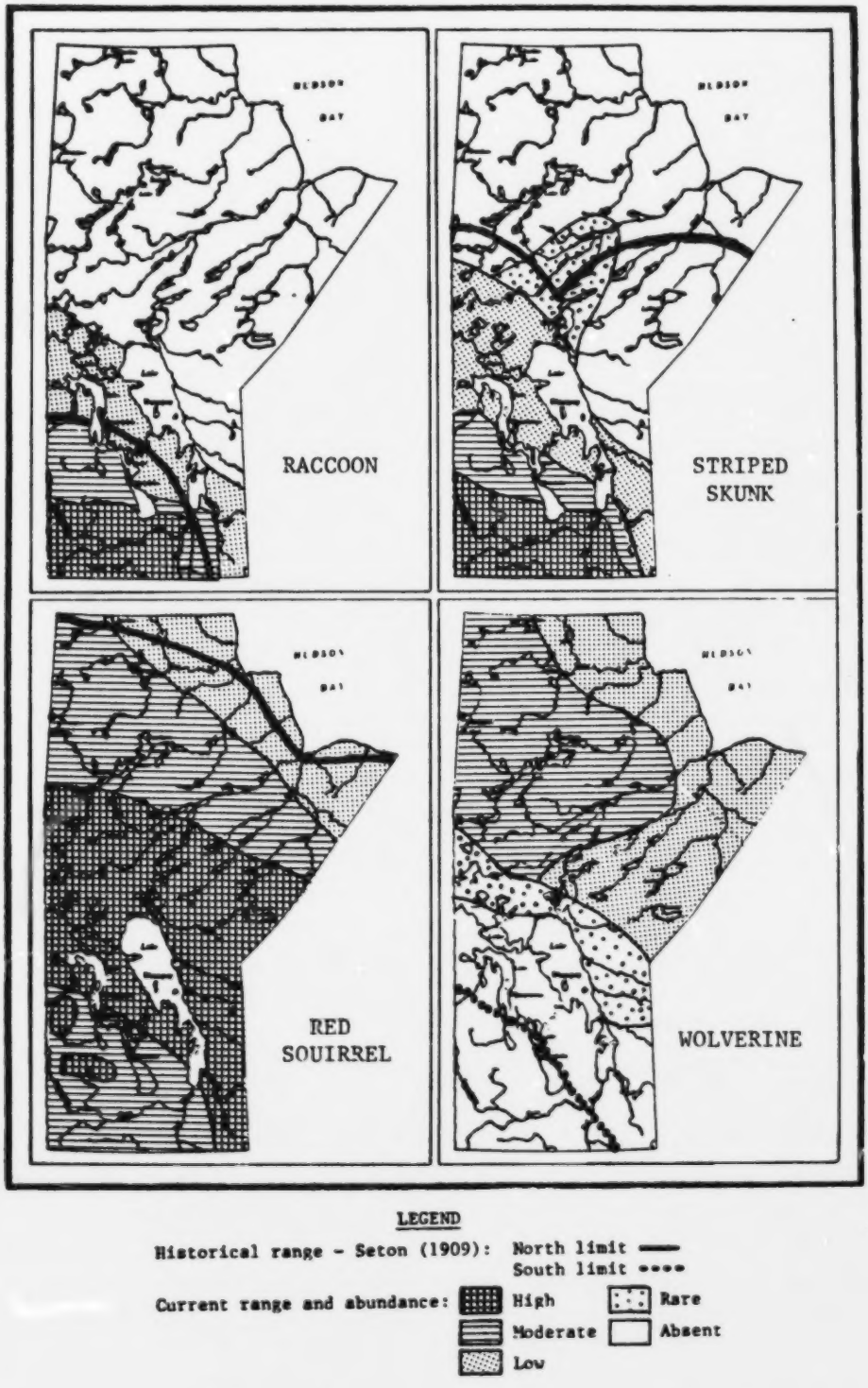

Fig. 5: Maps showing historical and current range and relative abundance of raccoon, striped skunk, red squirrel and wolverine.

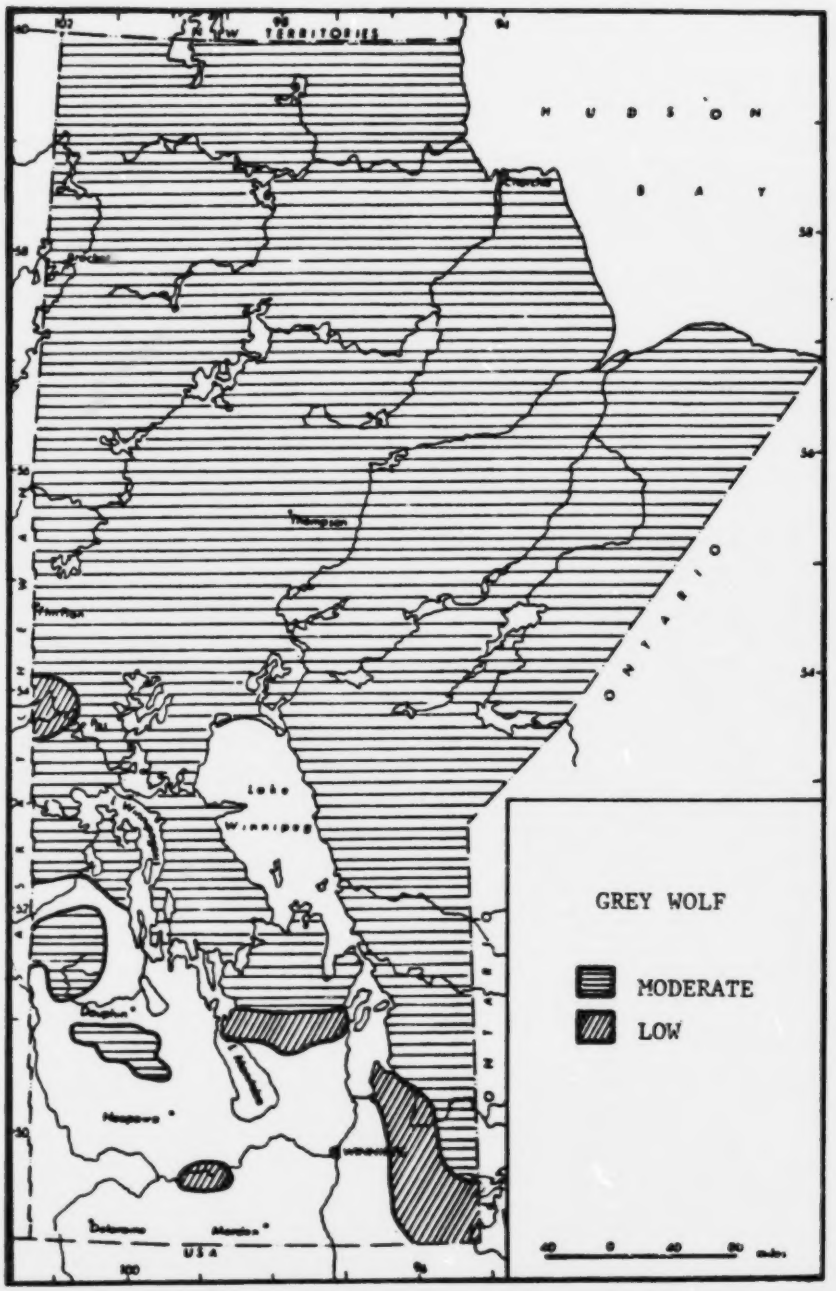

Fig. 6: Maps showing historical and current range and relative abundance of grey wolves.

Beaver- Castor canadensis: Although beaver apparently were not present at the turn of the century in the coastal tundra region, they now are present out to the Hudson Bay coast though at low densities. Low densities also occur in the intensive agricultural areas of the extreme southern part of the province in areas where suitable water bodies are scarce.

Coyote- Canis latrans: Coyotes have extended their range northward dramatically since the turn of the century. They are now present almost to the treeline, but their greatest densities are still in the agricultural and aspen parkland areas.

Ermine a) Mustela erminea (Short-tailed weasel): Short-tailed weasels are the primary weasel utilized by the fur industry and has a province-wide distribution. Seton (1909) indicated that the short-tailed weasel was absent in the extreme south west corner of the province.

b) Mustela frenata (Long-tailed weasel): There has been a very slight, northward expansion of long-tailed weasel range consistent with the expansion of agricultural areas. The densities of this species, however, has declined due to the intensification of cultivation and removal of wetland, fence row and forest edge that are general habitat requirements.

c) Mustela rixosa (Least weasel): Distribution of the least weasel is province wide but as it is not harvested for fur, little is known of the relative abundance of this species. Seton (1909) showed the least weasel as being absent from the extreme north eastern portion of the province.

Fisher- Martes pennanti: Fisher range has not changed dramatically since the turn of the century with both southern and northern limits bounded by the tree line. Recent range expansions have been recorded in the extreme north western portion of the province as well as a re-population of the Interlake area where fisher had not been seen for 40 years. Abundance has increased over much of their range, particularly noticeable in the southeastern corner of the province.

Fox, Arctic- Alopex lagopus: Population abundance and distribution is extremely variable on a 3-4 year cyclic basis. During extreme peaks in the cycle, arctic fox have been present within 100 km of the United States border. Distribution normally is restricted to the northern one-third of the province. Two colour phases are present with the blue phase much less common than the normal white phase.

Fox, Coloured- Vulpes vulpes: Although Seton (1909) indicated that red fox were not present in the extreme northeastern coastal area, they now are known to have a province-wide distribution with highest densities in the agricultural region. Three colour phases are present with a

higher proportion of the red phase in the southern part of the province and increasingly greater numbers of cross and silver phase foxes as one progresses northward.

Lynx, - Lynx canadensis: Distribution of lynx is province-wide during cyclic peaks, though densities are low both north and south of major forested areas. During cyclic lows lynx populations primarily occur in coniferous forests across the central and eastern portions of the province. Cycle progression is initiated in the west central area and then expands outward from that point. The population is currently at a low point in the population cycle occurrede in 1983/84.

Marten- Martes americana: Seton (1909) indicated that marten were absent only from the southwestern prairie area and the extreme northwest corner. Marten now are primarily restricted to the areas north and east of the southern agricultural and aspen parkland areas. Marten transplanted into the Duck Mountain Provincial Park and Forest on the west side of the province have done exceedingly well with a healthy population now present. Recent expansion of the marten population in western Ontario have now allowed for established marten populations all along the eastern side of Manitoba.

Mink- Mustela vison: Mink occur across the province with highest densities in north central Manitoba.

Muskrat- Ondatra zibethicus: Muskrat have a province-wide distribution though in low densities in tundra and intensively cultivated areas due to the absence of suitable wetland habitat. The highest densities occur in the prairie pothole regions and in major river delta marshes.

Otter- Lutra canadensis: Seton (1909) indicated that otters were distributed province-wide. Currently otter are not found within the heavily settled southern area except for the occasional incidental sighting. Major abundance is in the north central portion of the province with much lower densities in the northern tundra and southern aspen parkland areas.

Raccoon- Procyon lotor: Raccoons are at their northern limit in Manitoba. During periods of several successive mild winters, they advance northward of northern range limits recorded by Seton (1909). After severe winters, however, their range again shrinks back to optimal agricultural areas.

Striped skunk- Mephitis mephitis: Although Seton (1909) records skunks occurring in the east central portion of the province, it is highly unlikely that they were able to maintain any form of continuing presence in that northern coniferous area. Only recently have skunks inhabited the north central area and only as major highways and human habitation were established. The primary range is still the heavily settled southern agricultural areas.

Red squirrel- Tamiasciurus hudsonicus: Distribution of the red squirrel is province-wide though it is less common north of the tree line and in the heavily cultivated southern croplands. They are generally most abundant in coniferous forests of the central and eastern portion of the province as well as along southern river valleys and escarpments. Populations fluctuate with the availability of mast and cones.

Timber wolf (grey wolf)- Canis lupus: Seton (1909) showed wolves as having a province-wide distribution. Currently, wolves are uncommon south of the forested zone but continue to maintain populations on the fringe of major agricultural areas.

Wolverine- Gulo luscus: At the turn of the century, Seton (1909) indicated that wolverine were distributed across the province, except for the southwestern prairie region. Reductions in wolverine populations during the first part of this century eliminated much of the southern distribution. Increasing wolverine numbers and a subsequent range extension during the past decade have extended the southern limits of wolverine to within 150 km of Seton's southern range boundary.

Population Estimates and Trends

The only formal surveys conducted are on beaver and muskrat. Muskrat populations fluctuate so dramatically seasonally, annually and from one marsh to another depending on habitat conditons that most census data is only site specific and cannot be used for extrapolation over wide areas. Infra-red imagery, though costly, is the best technique for estimating muskrat populations and detecting annual changes in marsh habitat. Average population densities of 75 muskrats/hectare can be found on better marsh areas.

Fall surveys of beaver food caches in conjunction with ground verification provide good estimates of beaver numbers. Long distance transect surveys over the Interlake aspen parkland and eastern Pre-Cambian Shield areas have provided estimates of 1.4 beaver/km^2 and 1.3 beaver/km^2 respectively.

Harvest statistics and field reports from D.N.R. staff and trappers provide trend information on most furbearers. Currently, population levels are increasing for muskrat, marten, fisher, black bear, beaver and for red fox and coyote in southern areas. Stable population levels are evident for badger, short-tailed weasel, mink, otter, raccoon, red squirrel, striped skunk, wolverine and wolves. Bobcat and long-tailed weasel have declined slightly. Lynx and arctic fox, which are cyclic, were at the low points of their cycles during the (1983/84).

In the Five-year Report to the Legislature (1983), indices of population numbers of the various furbearers were presented. These

figures (Table 2) were based on the best information available and are to be considered conservative minimum estimates of the number present in the province as of 1981. Age/sex surveys of harvested furbearers were implemented for the 1984/85 fur season to aid in assessing population status and trends.

Habitat

Outside the intensive agricultural zone, habitat for furbearers is relatively stable and satisfactory. The trend in this area is towards a maturation of forest stands, primarily climax species which will improve the habitat for species such as marten. Decline in aspen, however, eventually may adversely affect beaver populations. Continuing hydro development and forestry operations, though sometimes detrimental in the short term, can benefit some areas by creating habitat diversity and ecotones.

In the intensive agricultural area, habitat is being lost at the annual rate of 3-5 percent of the remaining habitat. Species such as red fox, coyote, badger and raccoon seem able to cope with loss of cover and wetlands to some degree. Other species, however, such as beaver, muskrat, mink, the weasels and red squirrel will probably decline over the long term.

Trapping is not allowed on approximately one percent of the province. These restricted areas are Riding Mountain National Park, several portions of provincial parks, Heritage Parks, Ecological Reserves and within the perimeter highway of Winnipeg. Trapping on private land requires the owners permission.

Table 2. The Status of Furbearing Animals in Manitoba (1982).

Species	Estimated Population	Population Trend
beaver	250,000	stable
short-tailed weasel)		stable
long-tailed weasel)	500,000	declining
least weasel)		stable
coyote	30,000	stable
fisher	10,000	increasing
arctic fox	8,000	increasing (1)
red fox (2)	50,000	stable to increasing
otter	12,000	stable
badger	4,000	declining
bobcat	300	unknown (3)
marten	12,000	rapidly increasing
mink	120,000	stable
muskrat	1,000,000	fluctuating (4)
red squirrel	5,000,000	stable
wolverine	500	increasing
raccoon	20,000	stable (5)
lynx	6,000	declining (6)

(1) On an increasing part of its population cycle
(2) Includes cross fox and silver fox
(3) On the northern edge of the range of the species-populations in Manitoba will always be low
(4) Varies with habitat conditions in any given year
(5) May suffer high winter mortality
(6) On a declining part of its population cycle

UTILIZATION DATA

Fur Harvest Statistics:

Fur harvest statistics have been maintained on all furbearers since the 1919-1920 fur season with the first major collation of material in the Manitoba Fur Fact Book (Stardom and Bilan, 1977). Initially the records were kept by the Dominion Bureau of Statistics but, for most species, the responsibility was taken over by the province during the mid- 1920's. Table 3 shows the primary furbearers harvested in each biogeographic region and Figure 7 shows maps of the distribution of major furbearer harvest area for each species. An automated fur harvest statistics system was implemented during the 1984/85 fur season.

Illegal Utilization:

Illegal utilization is considered to be minor as the pelts of most animals taken outside of seasons is of little or no value. Licensing and harvest control are designed to encourage compliance and diminish the benefits of operation outside of the fur industry main stream.

Other Uses:

Utilization of furbearers specifically for food is minimal except possibly for black bear. Use for food is generally secondary to use of the pelt and usually only includes beaver, muskrat, lynx and red squirrel. Major food resources are the first two species. Use of

TABLE 3 : Major furbearer harvest by biogeographic region.

1. FARMLAND-ASPEN PARKLAND

SPECIES: BADGER
RACCOON
SKUNK
RED FOX
COYOTE
MUSKRAT
ERMINE

2. MIXED

SPECIES: MUSKRAT
COYOTE
RED FOX
ERMINE

3. BOREAL

SPECIES: SQUIRREL
ERMINE
BEAVER
FISHER
MINK
LYNX
WOLF
OTTER

4. BOREAL-TUNDRA TRANSITION

SPECIES: ARCTIC FOX
WOLVERINE
MARTEN
WOLF

5. COASTAL TUNDRA

SPECIES: ARCTIC FOX

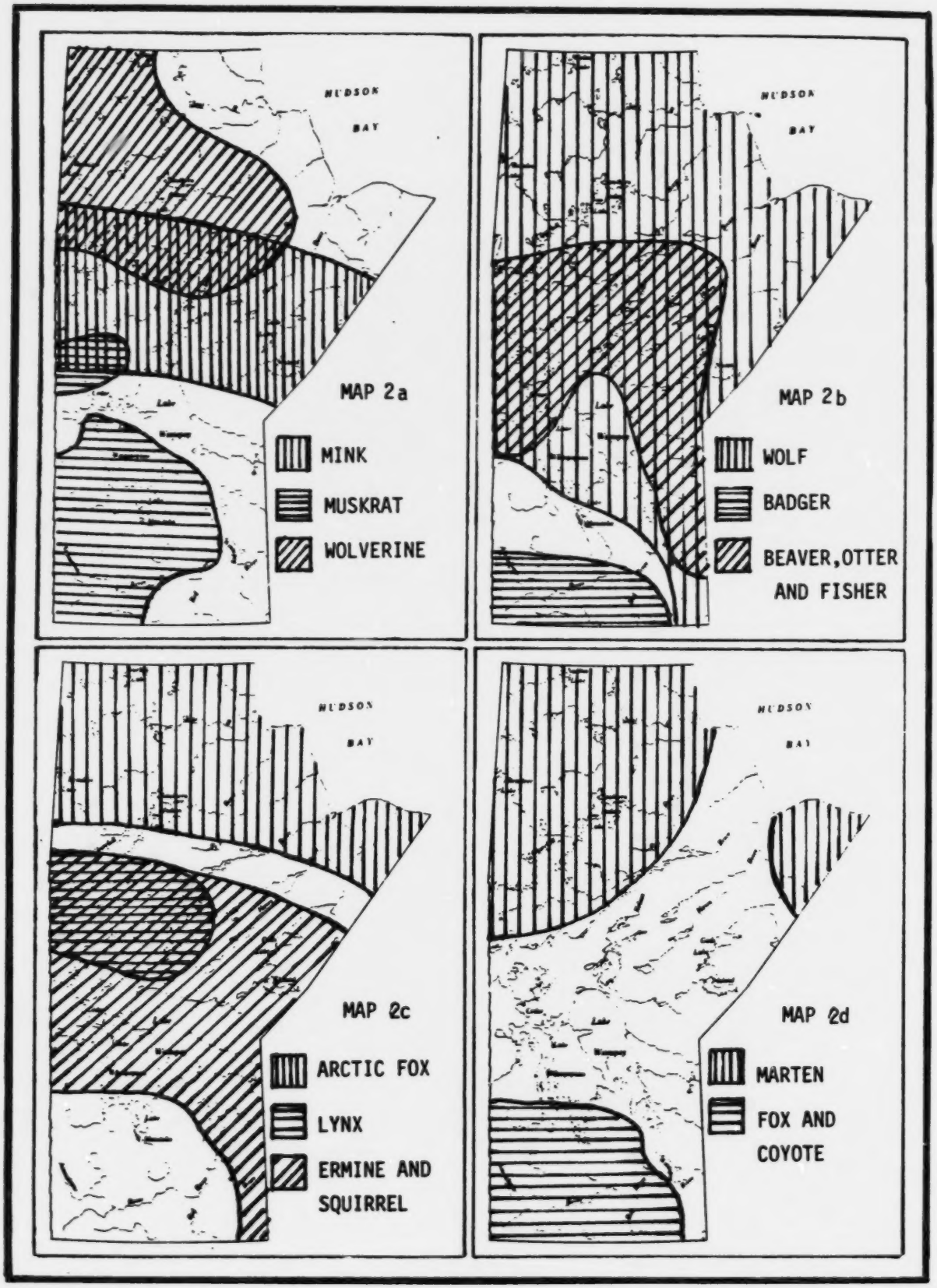

Fig. 7 : Distribution of major furbearer harvest by species.

furbearers in the live animal trade has been discouraged. Exceptions are the provision of orphaned or nuisance animals to zoos or occasionally to game farms for display.

Protection Status

Except for skunks all animals utilized by the fur industry are protected under The Wildlife Act (July, 1980). All are classified as furbearers except for black bear and grey wolves which are classified as big game. By regulation black bear and wolves can be taken under the authority of a trapping license (black bears only in Registered Trapline areas).

Control of Nuisance Furbearers:

Predator or nuisance animal control is reactive and site specific. Species normally involved are black bear, grey wolves, raccoon, beaver and skunk. The majority of the problems occur around Federal and Provincial Park borders, in major urban centres and along highway and railway right-of-ways.

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